REMARKS

The applicant appreciates the Examiner's thorough examination of the application and requests reexamination and reconsideration of the application in view of the preceding amendments and the following remarks.

The Examiner rejects claims 1, 3-6, 9-11, 14, 24, 26, and 27 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Pat. No. 6,420,008 to *Lewis et al.* in view of U.S. Pat. No. 6,785,144 to *Akram* and further in view of U.S. Pat. No. 6,412,701 to *Kohama et al.* The Examiner further rejects claim 10 as allegedly being unpatentable over *Lewis et al.* in view of *Akram* in view of *Kohama et al.* and further in view of U.S. Pat. No. 4,774,434 to *Bennion.*

The Examiner states in pertinent part:

> Lewis teaches the wearable circuit. Akram is cited merely to show that flexible circuits typically have traces and pads. Kohama teaches the specific means for securing circuits to fabrics, namely ultrasonic welding. Clearly one of ordinary skill in the art of electrical garments would be aware of different means for securing electronics to fabrics including ultrasonic welding in order to provide a specific strength of connection. The modified Lewis device would still function as intended.

None of the cited references teach a circuit secured onto a fabric by a thermoplastic reflow process. *Kohama et al.*, cited by the Examiner as teaching ultrasonic welding, does not teach this. Further, *Kohama et al.* does not teach a circuit secured or welded to, but instead discloses a chip embedded in, flexible fabric. *Kohama et al.* teaches ultrasonic welding to melt connections embedded within the fabric, not for affixation.

Moreover, *Kohama et al.* undertakes this embedding process to form an IC card, not an electrically active textile article as claimed by the applicants.

Notably also, *Kohama et al.* does not teach that the IC card is thereafter affixed to anything.

Kohama et al. teaches a chip 1 and a coil 2 embedded in non-woven fabric by hot pressing. After this process is complete, an ultrasonic horn is then used to melt input and output terminals 1a of the chip 1 and the end portions of the coil 2 (which are embedded within the substrate) together – not to affix a circuit onto a fabric to form an electrically active textile article. See e.g. *Kohama et al.* column 12, lines 35-46; column 13, lines 61 through column 14, line 4; column 15, lines 3-14.

Moreover, embedding a chip into (*Kohama et al.*) or welding a flexible circuit onto (applicants) a fabric are not options for *Lewis et al.*, which the Examiner combines with *Kohama et al.*

In sharp contrast to *Kohama et al.* and the applicant's claimed invention, *Lewis et al.* specifically cites the disadvantage of "displays ... designed ... to be permanently affixed to an article of clothing ...", and therefore designed (and intended, the applicants submit) "a display sticker ... adapted to be ... readily removed from a fabric article." See *Lewis et al.* column 1, lines 59-63 and Abstract.

The applicants further submit that such types of securing do not become an option because of the applicant's claimed invention. The applicants respectfully submit that would constitute hindsight reasoning.

For clarification and to advance prosecution, the applicant has amended claim 1 to recite an electrically active textile including a wearable fabric, a flexible circuit including traces and pads on a flexible substrate, said substrate welded onto the fabric by a thermoplastic reflow process, and at least one electronic component populating the circuit.

Thus, the applicants respectfully submit that the cited references do not individually, or in combination – which combination the applicants submit is improper – teach each and every element of the applicants' claim 1. Thus, claim 1 is not obvious over the cited references.

Accordingly, the applicants respectfully submit that claim 1 is in condition for allowance. For at least these reasons as well, the claims depending directly or indirectly from claim 1 are also in condition for allowance.

The applicant's independent claim 26 includes the recitation of a covering welded onto the fabric over the flex circuit and the at least one electronic component by a thermoplastic reflow process, wherein the flex circuit is in pressed engagement with the fabric and the covering. None of the cited references, nor their combination teach a covering welded onto a fabric such that the circuit is in pressing engagement with fabric and the covering.

Accordingly, the applicants submit that claim 26 is also not obvious over the cited references.

CONCLUSION

Each of the Examiner's rejections has been addressed or traversed. It is respectfully submitted that the application is in condition for allowance. Early and favorable action is respectfully requested.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the

undersigned or his associates, collect in Waltham, Massachusetts at (781) 890-5678.

Respectfully submitted,

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